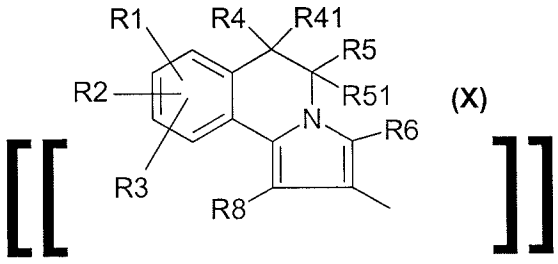
AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1. (Currently amended) A compound which inhibits PDE10, comprising a structural-element as an integral part of its overall structure, wherein said structure-element has the formula X



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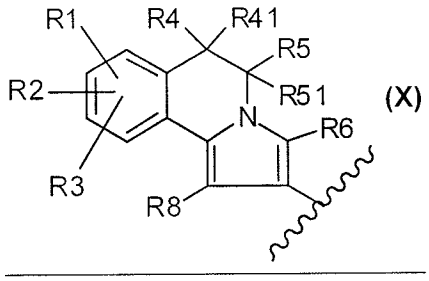


(X)

in which

R1 is halogen or 1-4C-alkoxy,

R2 is hydrogen, 1-4C-alkoxy or halogen,

R3 is hydrogen or 1-4C-alkoxy,

wherein R2 and R3 are not simultaneously hydrogen,

R4 is hydrogen,

R41 is hydrogen,

R5 is 1-4C-alkyl, 1-4C-alkoxycarbonyl or cyano, and

R51 is hydrogen,

R6 is 1-6C-alkyl or 1-4C-alkyl substituted by R61, in which

R61 is 1-4C-alkoxycarbonyl or -N(R611)R612, in which

R611 is hydrogen, 1-4C-alkyl, 3-7C-cycloalkyl or 3-7C-cycloalkyl-1-4C-alkyl, and

R612 is hydrogen or 1-4C-alkyl,

R8 is cyano, or -C(O)-OR9, in which

R9 is 1-4C-alkyl.

2. (Previously presented) The compound according to claim 1 which inhibits PDE10, comprising a structural-element as an integral part of the compound's overall structure, wherein said structure-element has the formula X according to claim 1, in which

R1 is halogen or 1-4C-alkoxy,

R2 is 1-4C-alkoxy or halogen,

R3 is hydrogen or 1-4C-alkoxy,

R4 is hydrogen,

R41 is hydrogen,

R5 is 1-4C-alkyl, and

R51 is hydrogen,

R6 is 1-6C-alkyl or 1-4C-alkyl substituted by R61, in which

R61 is 1-4C-alkoxycarbonyl or -N(R611)R612, in which

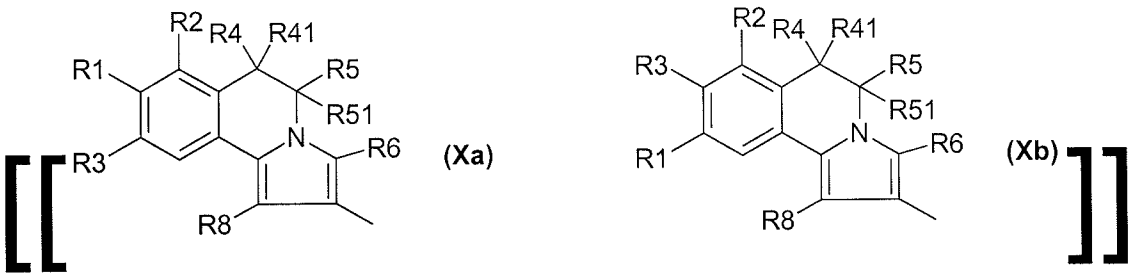
R611 is hydrogen, 1-4C-alkyl, 3-7C-cycloalkyl or 3-7C-cycloalkyl-1-4C-alkyl, and

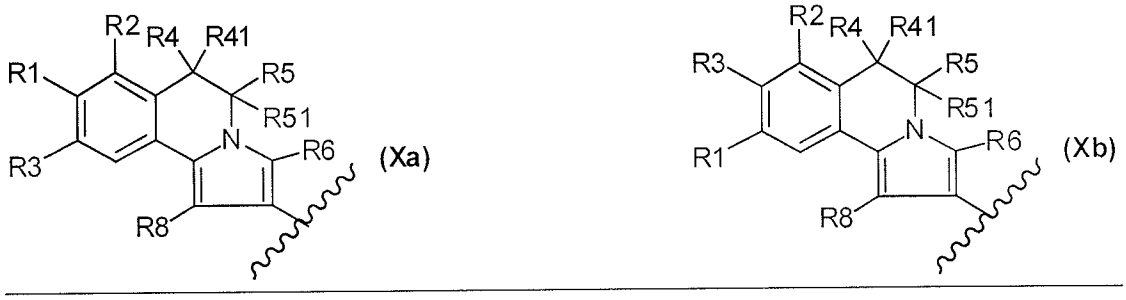
R612 is hydrogen or 1-4C-alkyl,

R8 is cyano, or -C(O)-OR9, in which

R9 is 1-4C-alkyl.

3. (Currently amended) The compound according to claim 1 which inhibits PDE10, comprising a structural-element as an integral part of the compound's overall structure, wherein said structure-element is of the formula Xa or Xb





in which

as a first alternative,

R1 is chlorine or fluorine,

R2 is hydrogen,

R3 is methoxy or ethoxy,

or, as a second alternative,

R1 is methoxy or ethoxy,

R2 is hydrogen,

R3 is methoxy or ethoxy,

or, as a third alternative,

R1 is chlorine or fluorine,

R2 is methoxy or ethoxy,

R3 is methoxy or ethoxy,

or, as a fourth alternative,

R1 is methoxy or ethoxy,

R2 is chlorine or fluorine,

R3 is methoxy or ethoxy,

or, as a fifth alternative,

R1 is methoxy or ethoxy,

R2 is methoxy or ethoxy,

R3 is methoxy or ethoxy,

R4 is hydrogen,

R41 is hydrogen,

R5 is methyl,

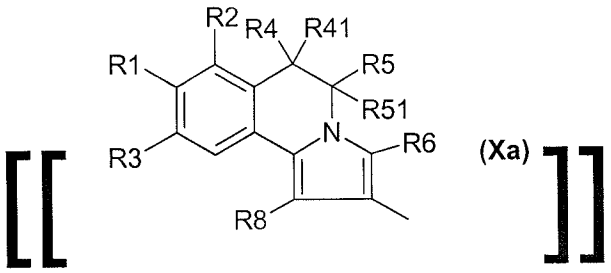
R51 is hydrogen,

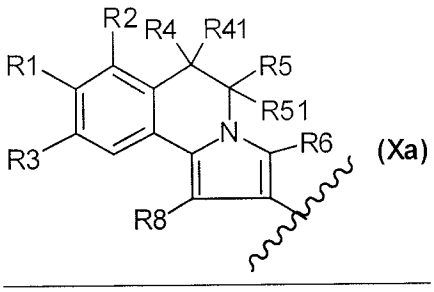
R6 is methyl, ethyl or methoxycarbonylethyl,

R8 is cyano.

4. (Currently amended) The compound according to claim 1 which inhibits PDE10, comprising a structural-element as an integral part of the compound's overall

structure, wherein said structure-element is of the formula Xa





in which

R1 is methoxy,

R2 is hydrogen,

R3 is methoxy,

R4 is hydrogen,

R41 is hydrogen,

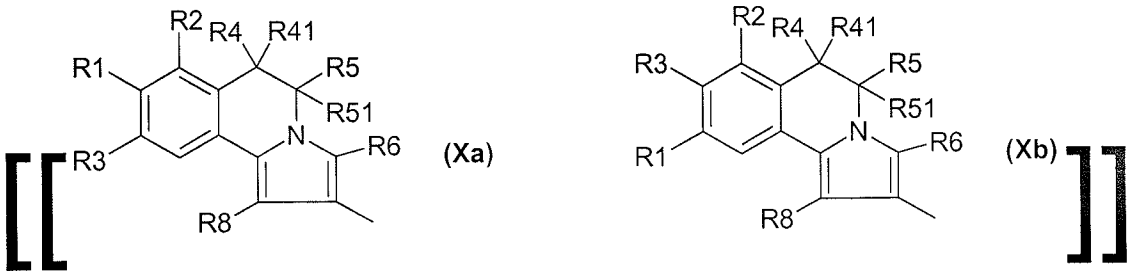
R5 is methyl,

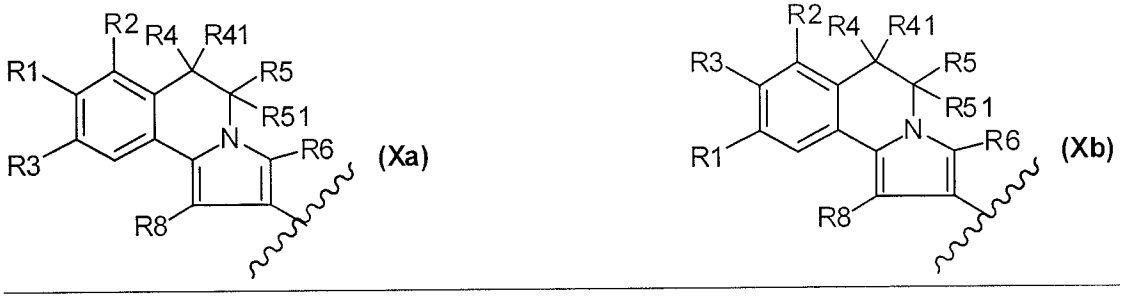
R51 is hydrogen,

R6 is methyl or methoxycarbonylethyl,

R8 is cyano.

5. (Currently amended) The compound according to claim 1 which inhibits PDE10, comprising a structural-element as an integral part of the compound's overall structure, wherein said structure-element is of the formula Xa or Xb





in which

R1 is 1-2C-alkoxy,

R2 is hydrogen, chlorine or fluorine,

R3 is 1-2C-alkoxy,

R4 is hydrogen,

R41 is hydrogen,

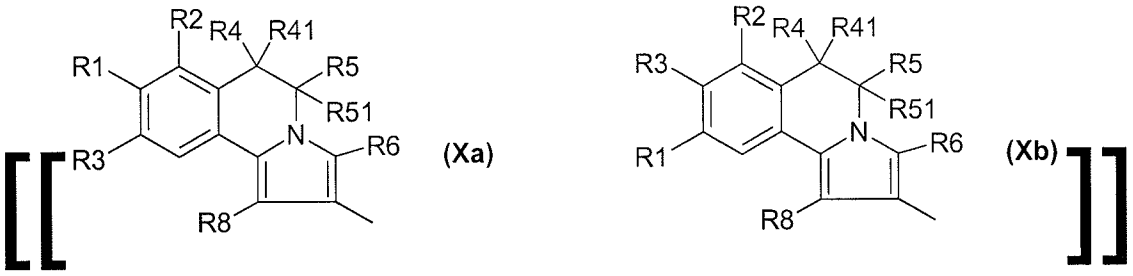
R5 is 1-2C-alkyl or cyano,

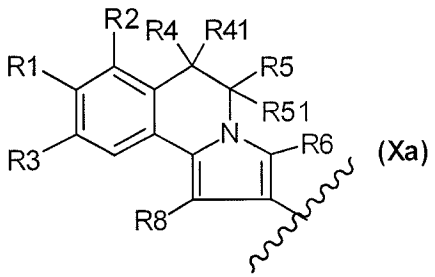
R51 is hydrogen,

R6 is 1-2C-alkyl, or 1-2C-alkyl substituted by 1-2C-alkoxycarbonyl,

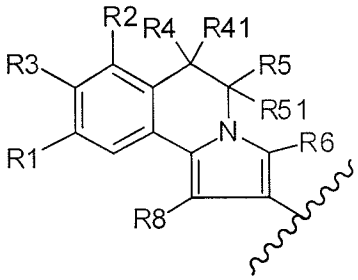
R8 is cyano.

6. (Currently amended) The compound according to claim 1 which inhibits PDE10, comprising a structural-element as an integral part of the compound's overall structure, wherein said structure-element is of the formula Xa or Xb





(Xa)



(Xb)

in which

R1 is 1-2C-alkoxy,

R2 is hydrogen, chlorine or fluorine,

R3 is 1-2C-alkoxy,

R4 is hydrogen,

R41 is hydrogen,

R5 is 1-2C-alkyl or cyano,

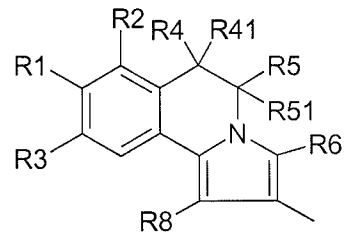
R51 is hydrogen,

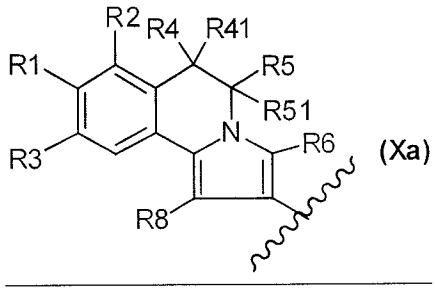
R6 is 1-2C-alkyl, or 1-2C-alkyl substituted by 1-2C-alkoxycarbonyl,

R8 is -C(O)-OR9, in which

R9 is 1-2C-alkyl.

7. (Currently amended) The compound according to claim 1 which inhibits PDE10, comprising a structural-element as an integral part of the compound's overall structure, wherein said structure-element is selected from the group consisting of those structure-elements of the formula Xa

[[ (Xa)]]



(Xa)

in which

R1 is methoxy,

R3 is methoxy,

R4 is hydrogen,

R41 is hydrogen, and

R51 is hydrogen,

and in which the following combinations 1.) – 4.), 7.) – 10.), 15.) – 26.), 31.) – 38.), 41.) – 46.) and 49.) - **[[**to**]]** 50.) of the substituent meanings for R2, R5, R6

and R8 apply:

	R2	R5	R6	R8
1.)	hydrogen	methyl	Methyl	cyano
2.)	hydrogen	methyl	Methyl	ethoxycarbonyl
3.)	hydrogen	methyl	2-methoxycarbonylethyl	cyano
4.)	hydrogen	methyl	2-methoxycarbonylethyl	ethoxycarbonyl
7.)	fluorine	methyl	methyl	cyano
8.)	fluorine	methyl	methyl	ethoxycarbonyl
9.)	fluorine	methyl	2-methoxycarbonylethyl	cyano
10.)	fluorine	methyl	2-methoxycarbonylethyl	ethoxycarbonyl
15.)	hydrogen	cyano	Methyl	cyano
16.)	hydrogen	cyano	Methyl	ethoxycarbonyl
17.)	hydrogen	cyano	2-methoxycarbonylethyl	cyano
18.)	hydrogen	cyano	2-methoxycarbonylethyl	ethoxycarbonyl
19.)	fluorine	cyano	Methyl	cyano
20.)	fluorine	cyano	Methyl	ethoxycarbonyl
21.)	fluorine	cyano	2-methoxycarbonylethyl	cyano
22.)	fluorine	cyano	2-methoxycarbonylethyl	ethoxycarbonyl
23.)	chlorine	methyl	Methyl	cyano
24.)	chlorine	methyl	Methyl	ethoxycarbonyl
25.)	chlorine	methyl	2-methoxycarbonylethyl	cyano

26.)	chlorine	methyl	2-methoxycarbonylethyl	ethoxycarbonyl
31.)	chlorine	cyano	methyl	cyano
32.)	chlorine	cyano	methyl	ethoxycarbonyl
33.)	chlorine	cyano	2-methoxycarbonylethyl	cyano
34.)	chlorine	cyano	2-methoxycarbonylethyl	ethoxycarbonyl
35.)	hydrogen	methyl	methyl	methoxycarbonyl
36.)	hydrogen	methyl	2-methoxycarbonylethyl	methoxycarbonyl
37.)	fluorine	methyl	methyl	methoxycarbonyl
38.)	fluorine	methyl	2-methoxycarbonylethyl	methoxycarbonyl
41.)	hydrogen	cyano	methyl	methoxycarbonyl
42.)	hydrogen	cyano	2-methoxycarbonylethyl	methoxycarbonyl
43.)	fluorine	cyano	methyl	methoxycarbonyl
44.)	fluorine	cyano	2-methoxycarbonylethyl	methoxycarbonyl
45.)	chlorine	methyl	methyl	methoxycarbonyl
46.)	chlorine	methyl	2-methoxycarbonylethyl	methoxycarbonyl
49.)	Chlorine	cyano	methyl	methoxycarbonyl
50.)	Chlorine	cyano	2-methoxycarbonylethyl	methoxycarbonyl

8. (Canceled)

9. (Withdrawn) A method of inhibiting PDE10 in a mammal, including a human, in the treatment of neurologic and psychiatric disorders, in the treatment of diabetes, or in the regulation of fertility of a masculine mammal, comprising administering to said mammal a compound containing - as an integral part of its overall structure - a structure-element as defined in claim 1.

10. (Withdrawn) A process to provide compounds, which inhibit PDE10, comprising the following steps:

a.) designing intellectually a structure of a compound comprising - as part of its overall structure - a structure-element as defined in claim 1;

b.) synthesizing materially a compound, which have the structure designed in step a.), in a manner known to the person skilled in the art, or as disclosed in the specification of the present invention, or analogously or similarly thereto.

11. (Withdrawn) A process for providing PDE10 inhibitors of the pyrrolodihydroisoquinoline class comprising the following steps:

a.) selecting intellectually a structure of a compound of the pyrrolodihydroisoquinoline class;

b.) modifying intellectually said selected structure in such a way that the modified structure comprises - as part of its overall structure - a structure-element as defined in claim 1;

c.) synthesizing materially a compound having said modified structure in a manner known to the person skilled in the art, or as disclosed in the specification of the present invention, or analogously or similarly thereto.

12. (Canceled)

13. (Currently amended) A compound obtainable by [[the]] a process ~~according to claim 10~~ comprising the following steps:

a.) designing intellectually a structure of a compound comprising - as part of its overall structure - a structure-element as defined in claim 1; and

b.) synthesizing said compound which has the structure designed in step a.).

14. (Withdrawn) A method for treating disorders of the central nervous system, movement disorders, obsessive/compulsive disorders, drug addictions, cognition deficiency disorders, mood disorders or mood episodes, or neurodegenerative disorders, by inhibiting of PDE10 comprising administering to a subject in need thereof a pharmaceutically effective and tolerable amount of a compound obtainable by a process according to claim 10.

15. (Canceled)

16. (Currently amended) A compound obtainable by **[[**the**]]** a process ~~according to claim 11~~ comprising the following steps:

a.) selecting intellectually a structure of a compound of the pyrrolodihydroisoquinoline class;

b.) modifying intellectually said selected structure in such a way that the modified structure comprises - as part of its overall structure - a structure-element as defined in claim 1; and

c.) synthesizing said compound having said modified structure.

17. (Withdrawn) A method for treating disorders of the central nervous system, movement disorders, obsessive/compulsive disorders, drug addictions, cognition deficiency disorders, mood disorders or mood episodes, or neurodegenerative disorders, by inhibiting of PDE10 comprising administering to a subject in need thereof a pharmaceutically effective and tolerable amount of a compound obtainable by a process according to claim 11.

18. (Withdrawn) A method for treating anxiety or psychotic disorders by inhibiting of PDE10 comprising administering to a subject in need thereof a pharmaceutically effective and tolerable amount of a compound obtainable by a process according to claim 10.

19. (Withdrawn) The method according to claim 18, wherein the anxiety or psychotic disorder is schizophrenia.

20. (Withdrawn) A method for treating anxiety or psychotic disorders by inhibiting of PDE10 comprising administering to a subject in need thereof a pharmaceutically effective and tolerable amount of a compound obtainable by a process according to claim 11.

21. (Withdrawn) The method according to claim 20, wherein the anxiety or psychotic disorder is schizophrenia.